REMARKS

The above-referenced patent application has been reviewed in light of the Office Action, dated February 14th, 2001, in which: Claims 1-7, 11-17, 19-27 and 29 are rejected under 35 U.S.C. 103(a), as being unpatentable over a combination of Fan (U.S. Patent No. 5,359,676, hereinafter "Fan") and Go (U.S. Patent No. 5,878,172, hereinafter "Go"); Claims 8-10, 18, and 28 are rejected under 35 U.S.C 103(a) as being unpatentable over Fan and Go, and further in view of well known prior art. Reconsideration of the above-referenced patent application in view of the foregoing changes and the following remarks is respectfully requested.

Claims 1-29 are now pending the above-referenced patent application. Claim 1 has been amended, and claim 2 has been cancelled. No claims have been added.

The Examiner has rejected claims 1-7, 11-17, 19-27 and 29 under 35 U.S.C 103(a). The rejection of these claims by the Examiner is respectfully traversed.

Applicants begin with claim 1. Claim 1 (as amended) recites:

" A video processor system comprising:

a video coder, the video coder including the capability to generate an edge detection map along a predetermined direction for an uncoded frame that is to be coded, wherein said video coder includes the capability to compress the edge detection map."

According to the Examiner, "Fan discloses generation of an edge detection map along horizontal and vertical direction for a decoded image. See col. 10, lines 27-44. Fan also discloses edge-sensitive post filtering to enhance the decoded image which is controlled by the edge detection map. See col. 11, lines 9-14. Fan does not disclose generation of the edge detection map for an uncoded image to be coded, coding the edge detection map for transmission via a communications channel along with an associated coded image, and decoding the coded edge detection map."

Assuming only for the sake of legal argument that Fan and Go could be combined, although Applicants have serious doubts of the ability to do so, the combination would still not contain all of the claimed features of the claimed subject matter, as amended. As just one example, neither Fan nor Go

disclose a video coder capable of compressing an edge detection map prior to transmission. Quoting from the detailed description, page 11, lines 8-9 "It is, likewise, noted that any one of a number of coding or compression schemes may also be employed to compress the edge detection map." Conversely, quoting from Go, Col. 6, lines 6-12, "The edge detector 21 detects edge points in the input image X_0 and outputs horizontal and vertical edge images Sh and Sv to the edge image encoder 24 in the encoding section 22. The edge image encoder 24 encodes these edge images to obtain edge image information Cs. The multiplexer 26 combines the reduced image information Cr and edge image information Cs into an encoded image C.." It is respectfully asserted that Go does not even recognize the problem dealt with by the claimed subject matter of the present application, and there is no contemplation of compression of edge detection data prior to transmission in either Go or Fan. It is, therefore, respectfully asserted that claim 1 is in a condition for allowance.

Additionally, The edge detection methods disclosed by Fan and Go, as compared to the claimed subject matter, are materially different. Go discloses a sum of differences approach, as stated on col. 6, line 66 to col. 7, line 23. This method disclosed by Go is applied to both the horizontal and vertical directions individually. Conversely, the detailed description, page 7, line 14 to page 8, line 15, disclose multiple methods for edge detection that may be used in accordance with the claimed subject matter, none of which are the same as the Go approach. It is respectfully asserted that Fan and Go disclose different solutions to a similar problem, and the differences are patentably distinct.

Claims 3-5 depend from and include all limitations of claim 1. It is respectfully asserted that claims 3-5 are in a condition for allowance for the same reasons as claim 1, as amended.

Claims 6-7, 11-17, 19-27, and 29 patentably distinguish from the cited patents for reasons similar to claim 1. It is, therefore, respectfully asserted that these claims are in a condition for allowance.

The Examiner has rejected claims 8-10, 18, and 28 under 35 U.S.C. 103(a) as being unpatentable over Fan and Go, as applied to claims 6, 17, and 27, and further in view of "well known prior art". It is respectfully requested that the Examiner provide documentation showing the "well known prior art" per MPEP 2144.03.

According to the Examiner, "[I]t would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have transmitted the coded edge detection map and associated data separately since it is well known in the art to transmit associated data separately and this would eliminate the need to perform multiplexing and demultiplexing." It is conceded by the Examiner that the combination of Fan and Go discloses a method of transmission where the image data and edge detection data is multiplexed prior to transmission. Conversely, Applicants claimed subject matter discloses one possible embodiment where the data is transmitted separately. Quoting from the detailed description, page 10, lines 6-12, "Although the invention is not limited in this respect, it is envisioned that an edge detection map may be transmitted as supplemental signal information corresponding to a coded video frame. Therefore, at the far or receiving end of the communications channel, depending on the capabilities of the decoder, this edge detection map may or may not be employed to enhance the decoded video frame, as described in more detail in the embodiment below. Likewise, in addition to transmitting one edge detection map, in alternative embodiments, multiple edge detection maps may be transmitted, as previously indicated." As stated previously, Applicants have serious doubts of the ability to combine Fan and Go, but regardless It is respectfully asserted that there are claimed features lacking in the combination of Fan and Go, and additionally, Fan and Go do not even recognize the problem, nor do they present any method for transmission of data separately. It is respectfully asserted, therefore, that claim 8 is in a condition for allowance.

Claims 9 and 10 depend from and include all limitations of claim 6. It is, therefore, respectfully asserted that claims 9 and 10 patentably distinguish from the cited patents for reasons similar to claim 6 and claim 8. It is, therefore, respectfully asserted that these claims are in a condition for allowance.

Claims 18 and 28 patentably distinguish from the cited patents for reasons similar to claim 1 and claim 8. Specifically, the method for generating an edge detection map is patentably distinct from the cited documents. It is, therefore, respectfully asserted that these claims are in a condition for allowance.

CONCLUSION

In view of the foregoing, it is respectfully asserted that all claims pending in this application, as amended, are in condition for allowance. If the Examiner has any questions, he is invited to contact the undersigned at (503) 264-9427. Reconsideration of this patent application and early allowance of all the claims is respectfully requested.

Respectfully submitted,

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Dated:
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The following claims have been amended as follows:

1. (Amended) A video processor system comprising:

a video coder, the video coder including the capability to generate an edge detection map along a predetermined direction for an uncoded frame that is to be coded, wherein said video coder includes the capability to compress the edge detection map.